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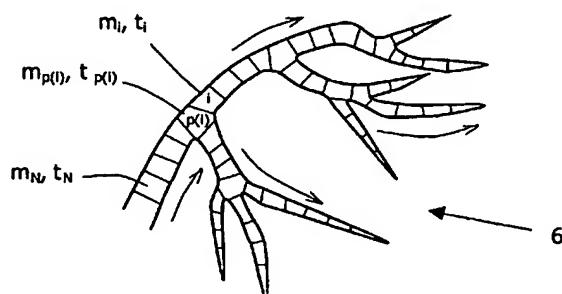
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(54) Title: RECONSTRUCTION OF THE CURRENT FLOW IN A VESSEL SYSTEM



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(57) Abstract: The invention relates to a method of reconstructing the current flow, or the bolus arrival times, in a vessel system (6). For the sections (i) of the vessel tree (6), bolus arrival times (m_i) are measured, for example in connection with an injection of contrast medium. Based on this measured data, linear programming is then used to calculate model bolus arrival times (t_i), which, on the one hand, through minimization of the function $E = \sum |m_i - t_i|$, are as close as possible to the measured data, and, on the other, by adherence to the boundary condition $\Delta_i = t_i - t_{p(i)} \geq 0$, ensure the monotony of the propagation, wherein $p(i)$ is the index of the vessel section in front of vessel section (i). Preferably, as smooth as possible a progression is compelled by means of an additional minimization of $E_m = \sum |t_i''|$.